

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image matching system for matching a first image and a second image, comprising:

a correction information generating means for performing a Fourier transform and a log-polar coordinate transform to said first image and said second image and generating correction information of said first image based on the results of said Fourier transform and log-polar coordinate transform; and

a matching means for performing processing of correction of said first image based on said correction information generated by said correction information generating means to generate a corrected first image, performing a correlation comparison between ~~processing of correlation of~~ said corrected first image and said second image, and determining if the corrected first image matches the second image based on ~~processing of matching the~~ results of said correlation processing.

Claim 2 (Currently Amended): An image matching system as set forth in claim 1, wherein~~[[:]]~~ said correction information generating means performs a further Fourier transform based on the results of said log-polar coordinate transform of said first image and said second image and generates scalar information and/or rotation information as said correction information based on correlation strength of said Fourier transformed first image and second image, and said matching means generates ~~performs processing of correlation of~~ said corrected first image based on said scalar information and/or said rotation information generated by said correction information generating means.

Claim 3 (Original): An image matching system as set forth in claim 2, wherein said correction information generating means generates said scalar information and/or rotation information as said correction information based on correlation strength of phase information of said Fourier transformed first image and second image.

Claim 4 (Currently Amended): An image matching system as set forth in claim 1, wherein said correction information generating means performs a Fourier-Mellin transform to said first image and said second image, performs a correlation comparison processing for correlation between said Fourier-Mellin transformed first image and second image, and generates said scalar information and/or rotation information as said correction information.

Claim 5 (Currently Amended): An image matching system as set forth in claim 2, wherein said matching means generates ~~performs processing of correction of~~ said corrected first image based on said scalar information and/or said rotation information generated by said correction information generating means, performs processing for Fourier transforming ~~transform to~~ said corrected first image and second image, and performs correlation comparison processing based on said Fourier transformed corrected first image and said Fourier transformed second image.

Claim 6 (Currently Amended): An image matching system as set forth in claim 2, wherein said matching means generates ~~performs processing of correction of~~ said corrected first image based on said scalar information and/or said rotation information generated by said correction information generating means, performs processing for Fourier transforming ~~transform to~~ said corrected first image and second image, and performs correlation

comparison processing based on phase information of said Fourier transformed corrected first image and said Fourier transformed second image.

Claim 7 (Original): An image matching system as set forth in claim 1, wherein said matching means generates parallel movement information of said corrected first image and second image based on a peak position of correlation strength of phase information of said corrected first image and second image, extracts common areas of said first image and said second image based on said movement amount information, performs processing for correlation of said extracted common areas, and performs processing for matching said first image and said second image based on the results of said correlation processing.

Claim 8 (Original): An image matching system as set forth in claim 1, wherein said matching means generates parallel movement information of said corrected first image and second image based on a peak position of correlation strength of phase information of said corrected first image and second image and performs processing for matching said first image and said second image when said parallel movement information is smaller than a predetermined amount of parallel movement.

Claim 9 (Currently Amended): An image matching method for matching a first image and a second image, comprising:

~~a first step of performing a Fourier transform and a log-polar coordinate transform to said first image and said second image; and~~

generating correction information of said first image based on the results of said Fourier transform and log-polar coordinate transform; ~~and~~

~~correcting a second step of performing processing of correction of~~ said first image  
based on said correction information; ~~generated in said first step,~~  
~~performing a correlation comparison processing of correlation of~~ said corrected said  
first image and said second image;[[,]] and  
~~determining if the corrected first image matches the second image based on~~  
~~processing of matching the results of said correlation comparison processing.~~

Claim 10 (Currently Amended): An image matching method as set forth in claim 9,  
wherein[[:]] said ~~performing a Fourier transform includes performing a second in said first~~  
~~step, a further~~ Fourier transform is ~~performed~~ to the results of said log-polar coordinate  
transform of said first image and said second image, and  
~~said generating correction information includes generating~~ scalar information and/or  
rotation information is ~~generated~~ as said correction information based on correlation strength  
of said Fourier transformed first image and second image, and  
~~said correcting includes in said second step, processing for correction is performed to~~  
~~correcting~~ said first image based on said scalar information and/or said rotation information  
~~generated at said first step.~~

Claim 11 (Currently Amended): An image matching method as set forth in claim 10,  
wherein ~~said generating correction information includes generating in said first step,~~ said  
scalar information and/or rotation information is ~~generated~~ as said correction information  
based on correlation strength of phase information said Fourier transformed first image and  
second image.

Claim 12 (Currently Amended): An image matching method as set forth in claim 9, wherein said performing a Fourier transform includes performing in said first step, a Fourier-Mellin transform ~~is performed~~ to said first image and said second image, and performing processing for correlation between said Fourier-Mellin transformed first image and second image ~~is performed~~, and

said generating correction information includes generating said scalar information and/or rotation information ~~is generated~~ as said correction information.

Claim 13 (Currently Amended): An image matching method as set forth in claim 10, wherein said correcting includes correcting in said second step, ~~processing of correction of~~ said first image based on ~~is performed to~~ said scalar information and/or said rotation information ~~generated at said first step, processing for~~ and performing a Fourier transform on ~~is performed to~~ said corrected first image and second image, and

said performing a correlation comparison includes performing a correlation comparison between ~~correlation processing is performed to~~ said Fourier transformed corrected first image and said Fourier transformed second image.

Claim 14 (Currently Amended): An image matching method as set forth in claim 10, wherein said correcting includes correcting in said second step, ~~processing of correction of~~ said first image based on ~~is performed to~~ said scalar information and/or said rotation information ~~generated at said first step, and performing a processing for~~ Fourier transform on ~~is performed to~~ said corrected first image and second image, and

said performing a correlation comparison includes performing a correlation comparison between ~~correlation processing is performed to~~ phase information of said Fourier transformed corrected first image and said Fourier transformed second image.

Claim 15 (Currently Amended): An image matching method as set forth in claim 9, wherein said correcting includes generating in said second step, parallel movement information of said corrected first image and second image based on ~~is performed to~~ a peak position of correlation strength of phase information of said corrected first image and second image, and extracting common areas of said first image and said second image from ~~are extracted from~~ said movement amount information,

said performing a correlation comparison includes performing a correlation comparison between ~~processing for correlation of~~ said extracted common areas ~~is performed~~, and

determining if the corrected first image matches the second image includes determining if the corrected first image matches the second image based on results of said correlation comparison between said extracted common areas ~~processing for matching said first image and said second image is performed to the results of said correlation processing.~~

Claim 16 (Currently Amended): An image matching method as set forth in claim 9, wherein said correcting includes generating in said second step, parallel movement information of said corrected first image and second image ~~is generated~~ based on a peak position of correlation strength of phase information of said corrected first image and second image, and

determining if the corrected first image matches the second image ~~processing for matching said first image and said second image~~ is performed when said parallel movement information is smaller than a predetermined amount of parallel movement.

Claim 17 (Currently Amended): A computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the

processor to perform a method ~~program to be executed by an information processing apparatus for performing processing~~ for matching a first image and a second image, the method comprising:

~~a first routine for~~ performing a Fourier transform and a log-polar coordinate transform to said first image and said second image; ~~and~~

generating correction information of said first image based on the results of said Fourier transform and log-polar coordinate transform; ~~and~~

correcting a second routine for performing processing for correction said first image ~~[[to] based on said correction information; generated by said first routine,~~

performing a correlation comparison ~~processing for correlation~~ of said corrected said first image and said second image; ~~[[,]] and~~

determining if the corrected first image matches the second image based on ~~processing for matching the~~ results of said correlation comparison ~~processing~~.

Claim 18 (Currently Amended): A computer readable medium ~~program~~ as set forth in claim 17, wherein ~~[[:]]~~ performing a Fourier transform includes performing a second ~~said first routine performs a further~~ Fourier transform based on the results of said log-polar coordinate transform of said first image and said second image, and

said generating correction information includes generating ~~generates~~ scalar information and/or rotation information as said correction information based on correlation strength of said Fourier transformed first image and second image, and

said correcting includes ~~said second routine performs processing for correction of~~ correcting said first image based on said scalar information and/or said rotation information ~~generated by said first routine~~.

Claim 19 (Currently Amended): A computer readable medium ~~program~~ as set forth in claim 18, wherein said generating correction information ~~first routine~~ generates said scalar information and/or rotation information as said correction information based on correlation strength of phase information said Fourier transformed first image and second image.

Claim 20 (Currently Amended): A computer readable medium ~~program~~ as set forth in claim 17, wherein said performing a Fourier transform ~~first routine~~ performs a Fourier-Mellin transform to said first image and said second image, performs processing for correlation between said Fourier-Mellin transformed first image and second image, and generates said scalar information and/or rotation information as said correction information.

Claim 21 (Currently Amended): A computer readable medium ~~program~~ as set forth in claim 18, wherein said correcting includes correcting ~~second routine performs processing for correction of~~ said first image based on said scalar information and/or said rotation information ~~and generated at said first routine~~, performs ~~a processing for~~ Fourier transform on said corrected first image and second image, and

said performing a correlation comparison performs correlation comparison processing based on said Fourier transformed corrected first image and said Fourier transformed second image.

Claim 22 (Currently Amended): A computer readable medium ~~program~~ as set forth in claim 19, wherein said correcting includes correcting ~~second routine performs processing for correction of~~ said first image based on said scalar information and/or said rotation information generated at said first routine, performs ~~a processing for~~ Fourier transform on ~~[[to]]~~ said corrected first image and second image, and



said performing a correlation comparison performs correlation comparison processing based on phase information of said Fourier transformed corrected first image and said Fourier transformed second image.

Claim 23 (Currently Amended): A computer readable medium ~~program~~ as set forth in claim 17, wherein said correcting second routine generates parallel movement information of said corrected first image and second image based on a peak position of correlation strength of phase information of said corrected first image and second image, and extracts common areas of said first image and said second image based on said movement amount information,

said performing a correlation comparison performs a processing for correlation comparison of said extracted common areas, and

said determining includes determining if the corrected first image matches the second image performs processing for matching said first image and said second image based on results of said correlation comparison of said extracted common areas processing.

Claim 24 (Currently Amended): A computer readable medium ~~program~~ as set forth in claim 17, wherein said correcting second routine generates parallel movement information of said corrected first image and second image based on a peak position of correlation strength of phase information of said corrected first image and second image, and

said determining includes determining if the corrected first image matches the second image performs processing for matching said first image and said second image when said parallel movement information is smaller than a predetermined amount of parallel movement.

Claim 25 (New): An image matching system for matching a first image and a second image, comprising:

a correction information generating unit configured to perform a Fourier transform and a log-polar coordinate transform on said first image and said second image, and to generate correction information of said first image based on the results of said Fourier transform and log-polar coordinate transform;

a correction unit configured to correct said first image based on said correction information to generate a corrected first image;

a correlation unit configured to perform a correlation comparison between said corrected first image and said second image; and

a matching unit configured to determine if the corrected first image matches the second image based on results of said correlation unit.